

FIG. 1

MAPK-ACTIVATED PROTEIN KINASE 2, ETC.

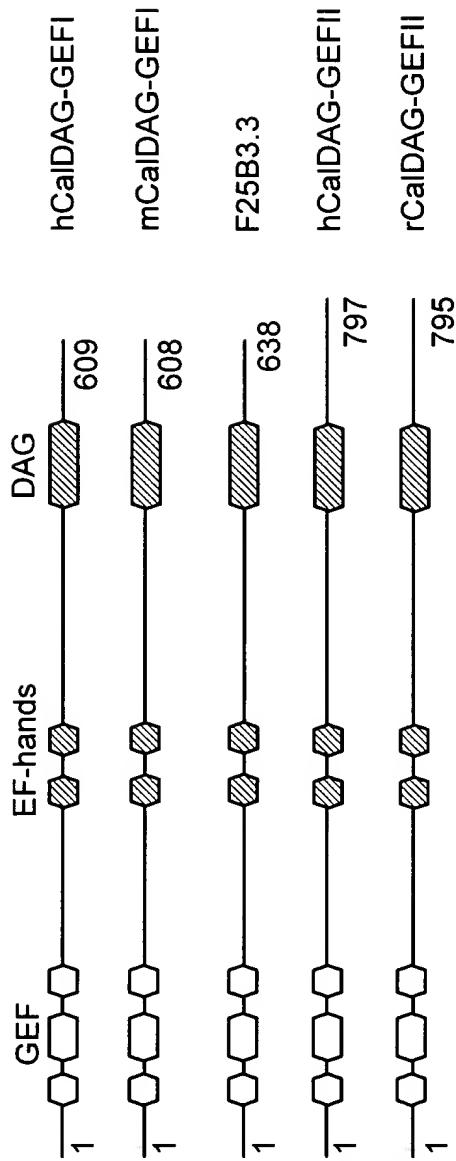


FIG. 2A

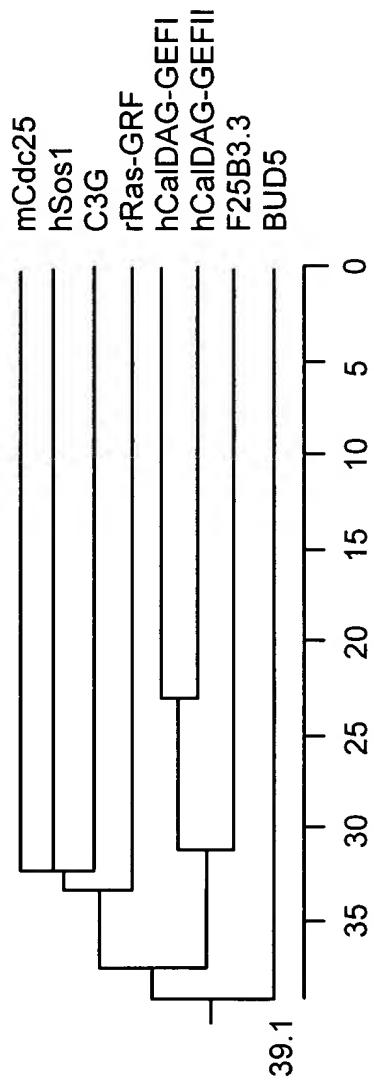


FIG. 2B

3/12

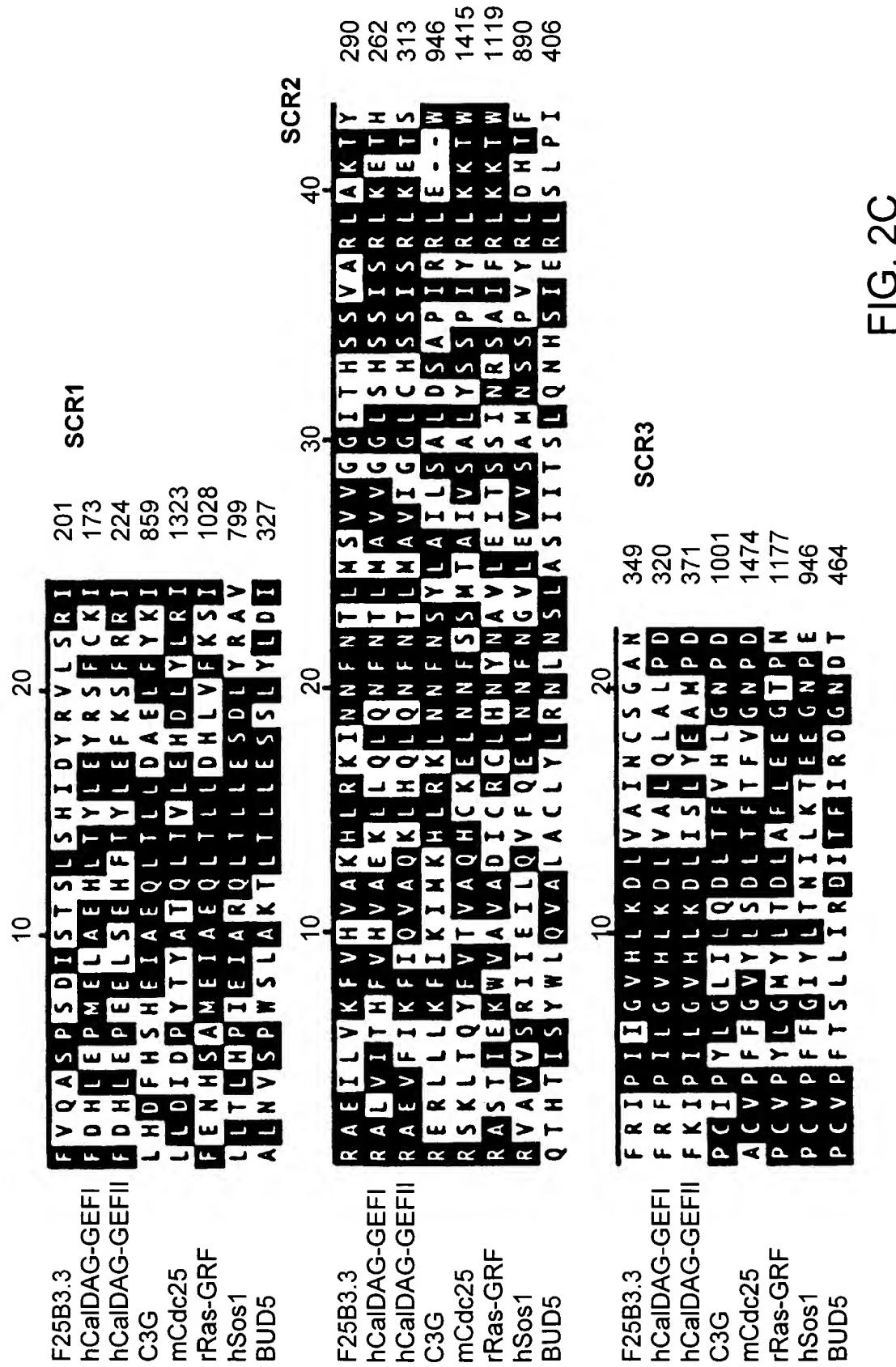


FIG. 2D-1	FIG. 2D-2
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FIG. 2D

hCalDAG-GEFI	W A G T L D L D K G C T Y E E L I L R G C I E A F D D S G K V R D P Q L V R M F L M M H P N Y I P S S
mcalDAG-GEFI	W A S T L D L D K G C T Y E E L I L R G C I E A F D D S G K V R D P Q L V R M F L M M H P N Y I P S S
hCalDAG-GEFI	K E L K A L L D Q E G N R R H S S L I D I D S V P T Y K W K R Q V T Q R N P V G Q K K R K M S L L F
mcalDAG-GEFI	K E L K A L L D Q E G N R R H S S L I D I E S V P T Y K W K R Q V T Q R N P V E Q X K R K M S L L F
hCalDAG-GEFI	W S V S Q W V Q L M I L S K P T A P Q R A L V I T H F V V H V A E K L L Q L Q N F N T L M A V V G G L
mcalDAG-GEFI	W S V S Q W V Q L M I L S K P T A T Q R A L V I T H F V V H V A E K L L Q L Q N F N T L M A V V G G L
hCalDAG-GEFI	F P I L G V H L K D L V A L Q L A L P D W L D P A R T R I L N G A K M K Q L F S I L E E L A M V T S L
mcalDAG-GEFI	F P I L G V H L K D L V A L Q L A L P D W L D P G R T R I L N G A K M R Q L F S I L E E L A M V T S L
hCalDAG-GEFI	P P R P P V L E E N T S A A K P X K L D Q A L V Y E H I E K M V E S V F R N F D V D G D G H I S Q E E
mcalDAG-GEFI	P P R P P V L E E N T S V A K P K L D Q A L V A E H I E K M V E S V F R N F D V D G D G H I S Q E E
hCalDAG-GEFI	F Q E S N S L R P V A C R H C K A L I L G I Y K Q C L K C R A C G V N C H K Q C K D R L S V E C R R
mcalDAG-GEFI	F Q E S N S L R P V A C R H C K A L I L G I Y K Q C L K C R A C G V N C H K Q C K E R L S V E C R R
hCalDAG-GEFI	E D G V F D I H L
mcalDAG-GEFI	E D G V F D I H L

FIG. 2D-1

5/12

QIAAKLKH ¹ YQ ² SRKDMSN ³ SIQ ⁴ V ⁵ TC ⁶ HLVRY ⁷ W ⁸ ISAF ⁹ PAE ¹⁰ FDLN ¹¹ PELA ¹² E ¹³ Q ¹⁴ I	100
QIA ¹⁵ SKL ¹⁶ HL ¹⁷ Y ¹⁸ Q ¹⁹ Q ²⁰ SRKDMSN ²¹ SIQ ²² V ²³ TC ²⁴ HLVRY ²⁵ W ²⁶ ISAF ²⁷ PAE ²⁸ FDLN ²⁹ PELA ³⁰ E ³¹ Q ³² I	100
DHLEPHELA ³³ EHL ³⁴ TY ³⁵ YRSFCK ³⁶ K ³⁷ I ³⁸ F ³⁹ Q ⁴⁰ DY ⁴¹ H ⁴² S ⁴³ F ⁴⁴ V ⁴⁵ TH ⁴⁶ GCT ⁴⁷ TYDN ⁴⁸ P ⁴⁹ YLERF ⁵⁰ FI ⁵¹ L ⁵² F	200
DHLEPHELA ⁵³ EHL ⁵⁴ TY ⁵⁵ YRSFCK ⁵⁶ K ⁵⁷ I ⁵⁸ F ⁵⁹ Q ⁶⁰ DY ⁶¹ H ⁶² S ⁶³ F ⁶⁴ V ⁶⁵ TH ⁶⁶ GCT ⁶⁷ TYDN ⁶⁸ P ⁶⁹ YLERF ⁷⁰ FI ⁷¹ L ⁷² F	200
SHSSSISSRLK ⁷³ E ⁷⁴ TH ⁷⁵ SH ⁷⁶ V ⁷⁷ SP ⁷⁸ E ⁷⁹ T ⁸⁰ I ⁸¹ K ⁸² I ⁸³ N ⁸⁴ E ⁸⁵ G ⁸⁶ L ⁸⁷ T ⁸⁸ E ⁸⁹ L ⁹⁰ V ⁹¹ T ⁹² A ⁹³ T ⁹⁴ G ⁹⁵ Y ⁹⁶ R ⁹⁷ R ⁹⁸ L ⁹⁹ A ¹⁰⁰ AC ¹⁰¹ Y ¹⁰² G ¹⁰³ F ¹⁰⁴ R	300
SHSSSISSRLK ¹⁰⁵ E ¹⁰⁶ TH ¹⁰⁷ SH ¹⁰⁸ V ¹⁰⁹ SP ¹¹⁰ D ¹¹¹ T ¹¹² I ¹¹³ K ¹¹⁴ I ¹¹⁵ N ¹¹⁶ E ¹¹⁷ G ¹¹⁸ L ¹¹⁹ T ¹²⁰ E ¹²¹ L ¹²² V ¹²³ T ¹²⁴ A ¹²⁵ Q ¹²⁶ R ¹²⁷ P ¹²⁸ S ¹²⁹ K ¹³⁰ S ¹³¹ S ¹³² P ¹³³ T ¹³⁴ S ¹³⁵ K ¹³⁶ S ¹³⁷ S ¹³⁸ P ¹³⁹ T ¹⁴⁰ S ¹⁴¹ C ¹⁴² T ¹⁴³ P	300
RPPVQANP ¹⁴⁴ D ¹⁴⁵ L ¹⁴⁶ S ¹⁴⁷ L ¹⁴⁸ T ¹⁴⁹ V ¹⁵⁰ S ¹⁵¹ L ¹⁵² D ¹⁵³ Q ¹⁵⁴ Y ¹⁵⁵ Q ¹⁵⁶ T ¹⁵⁷ E ¹⁵⁸ D ¹⁵⁹ E ¹⁶⁰ L ¹⁶¹ Y ¹⁶² Q ¹⁶³ I ¹⁶⁴ Y ¹⁶⁵ Q ¹⁶⁶ Y ¹⁶⁷ Q ¹⁶⁸ L ¹⁶⁹ S ¹⁷⁰ I ¹⁷¹ Q ¹⁷² L ¹⁷³ S ¹⁷⁴ I ¹⁷⁵ Q ¹⁷⁶ R ¹⁷⁷ P ¹⁷⁸ S ¹⁷⁹ K ¹⁸⁰ S ¹⁸¹ S ¹⁸² P ¹⁸³ T ¹⁸⁴ S ¹⁸⁵ C ¹⁸⁶ T ¹⁸⁷ P	400
RPPVQANP ¹⁸⁸ D ¹⁸⁹ L ¹⁹⁰ S ¹⁹¹ L ¹⁹² T ¹⁹³ V ¹⁹⁴ S ¹⁹⁵ L ¹⁹⁶ D ¹⁹⁷ Q ¹⁹⁸ Y ¹⁹⁹ Q ²⁰⁰ T ²⁰¹ E ²⁰² D ²⁰³ E ²⁰⁴ L ²⁰⁵ Y ²⁰⁶ Q ²⁰⁷ L ²⁰⁸ S ²⁰⁹ I ²¹⁰ Q ²¹¹ L ²¹² S ²¹³ I ²¹⁴ Q ²¹⁵ R ²¹⁶ P ²¹⁷ S ²¹⁸ K ²¹⁹ S ²²⁰ S ²²¹ P ²²² T ²²³ S ²²⁴ C ²²⁵ T ²²⁶ P	400
FQIIRGNFP ²²⁷ Y ²²⁸ L ²²⁹ S ²³⁰ A ²³¹ F ²³² G ²³³ D ²³⁴ I ²³⁵ D ²³⁶ Q ²³⁷ N ²³⁸ Q ²³⁹ D ²⁴⁰ G ²⁴¹ C ²⁴² I ²⁴³ S ²⁴⁴ R ²⁴⁵ E ²⁴⁶ M ²⁴⁷ I ²⁴⁸ S ²⁴⁹ Y ²⁵⁰ F ²⁵¹ L ²⁵² R ²⁵³ S ²⁵⁴ S ²⁵⁵ S ²⁵⁶ Y ²⁵⁷ L ²⁵⁸ G ²⁵⁹ C ²⁶⁰ R ²⁶¹ H ²⁶² G ²⁶³ F ²⁶⁴ V ²⁶⁵ H ²⁶⁶ N ²⁶⁷	500
FQIIRGNFP ²⁶⁸ Y ²⁶⁹ L ²⁷⁰ S ²⁷¹ A ²⁷² F ²⁷³ G ²⁷⁴ D ²⁷⁵ I ²⁷⁶ D ²⁷⁷ Q ²⁷⁸ N ²⁷⁹ Q ²⁸⁰ D ²⁸¹ G ²⁸² C ²⁸³ I ²⁸⁴ S ²⁸⁵ R ²⁸⁶ E ²⁸⁷ M ²⁸⁸ I ²⁸⁹ S ²⁹⁰ Y ²⁹¹ L ²⁹² G ²⁹³ C ²⁹⁴ R ²⁹⁵ H ²⁹⁶ G ²⁹⁷ F ²⁹⁸ V ²⁹⁹ H ³⁰⁰	500
RAQSVSLEGSAP ³⁰¹ S ³⁰² P ³⁰³ S ³⁰⁴ P ³⁰⁵ S ³⁰⁶ P ³⁰⁷ H ³⁰⁸ W ³⁰⁹ H ³¹⁰ R ³¹¹ A ³¹² F ³¹³ S ³¹⁴ L ³¹⁵ P ³¹⁶ R ³¹⁷ P ³¹⁸ G ³¹⁹ R ³²⁰ S ³²¹ S ³²² R ³²³ P ³²⁴ P ³²⁵ E ³²⁶ I ³²⁷ R ³²⁸ E ³²⁹ E ³³⁰ V ³³¹ Q ³³² T ³³³ V ³³⁴ 600	600
RAQSVSLEGSAP ³³⁵ S ³³⁶ P ³³⁷ S ³³⁸ P ³³⁹ S ³⁴⁰ P ³⁴¹ H ³⁴² W ³⁴³ H ³⁴⁴ R ³⁴⁵ I ³⁴⁶ H ³⁴⁷ W ³⁴⁸ I ³⁴⁹ H ³⁵⁰ H ³⁵¹ W ³⁵² I ³⁵³ H ³⁵⁴ Q ³⁵⁵ T ³⁵⁶ V ³⁵⁷ 608	608

FIG. 2D-2

6/12

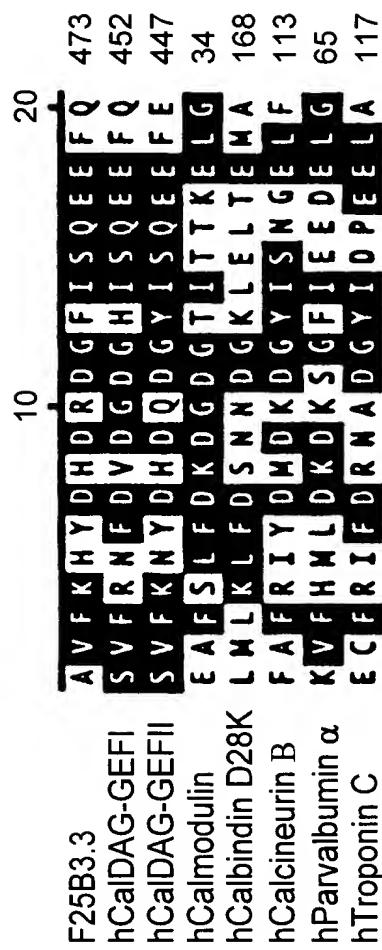


FIG. 2E

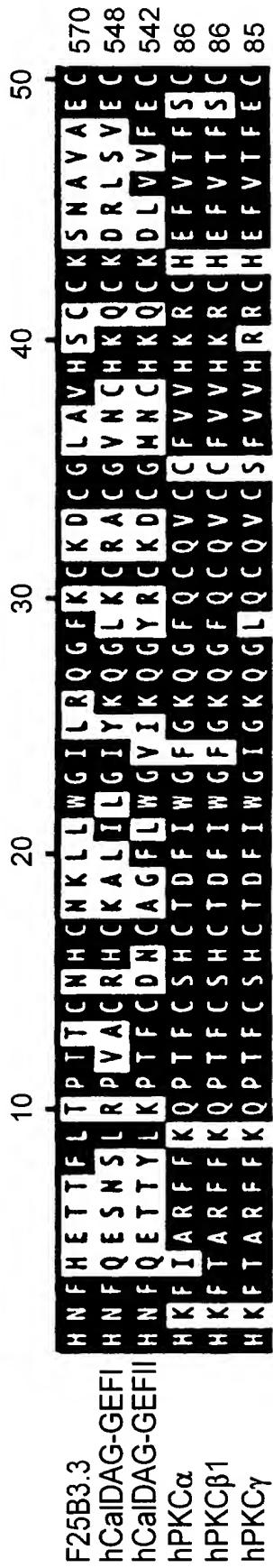
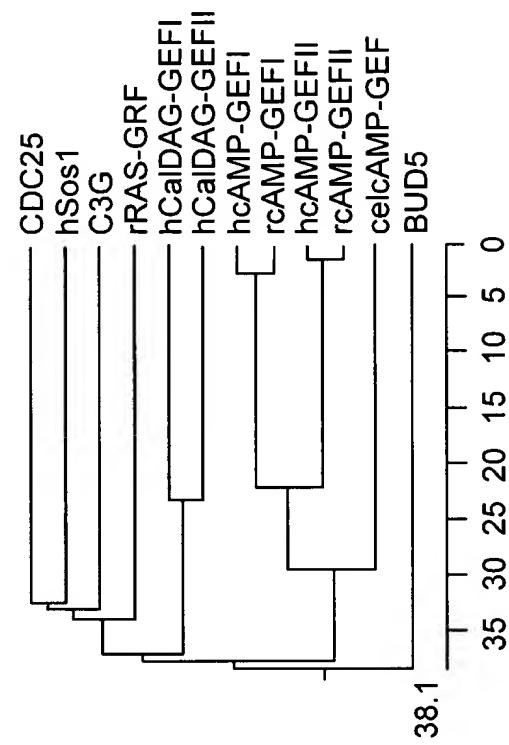
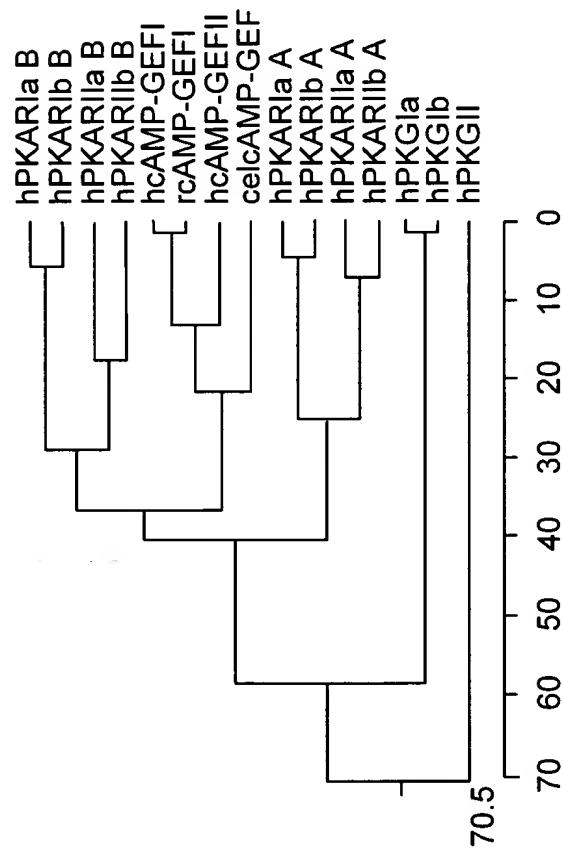
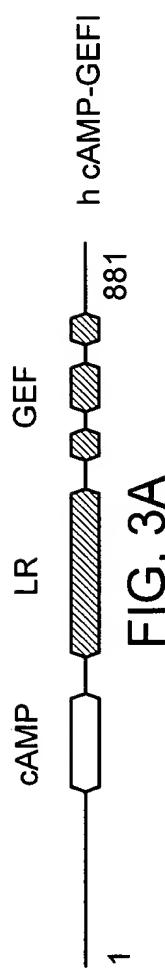


FIG. 2F



8/12

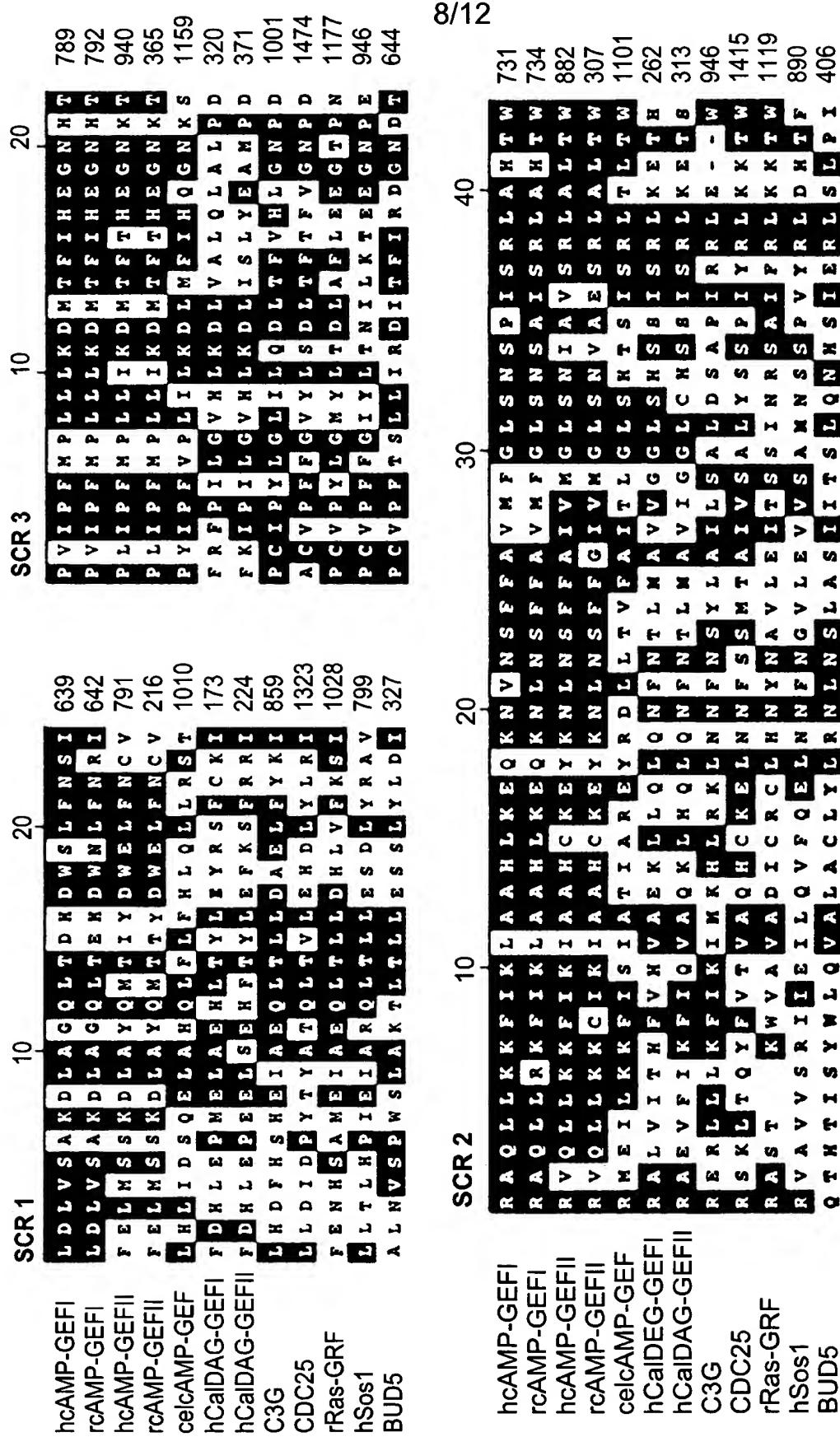


FIG. 3D

FIG. 3E

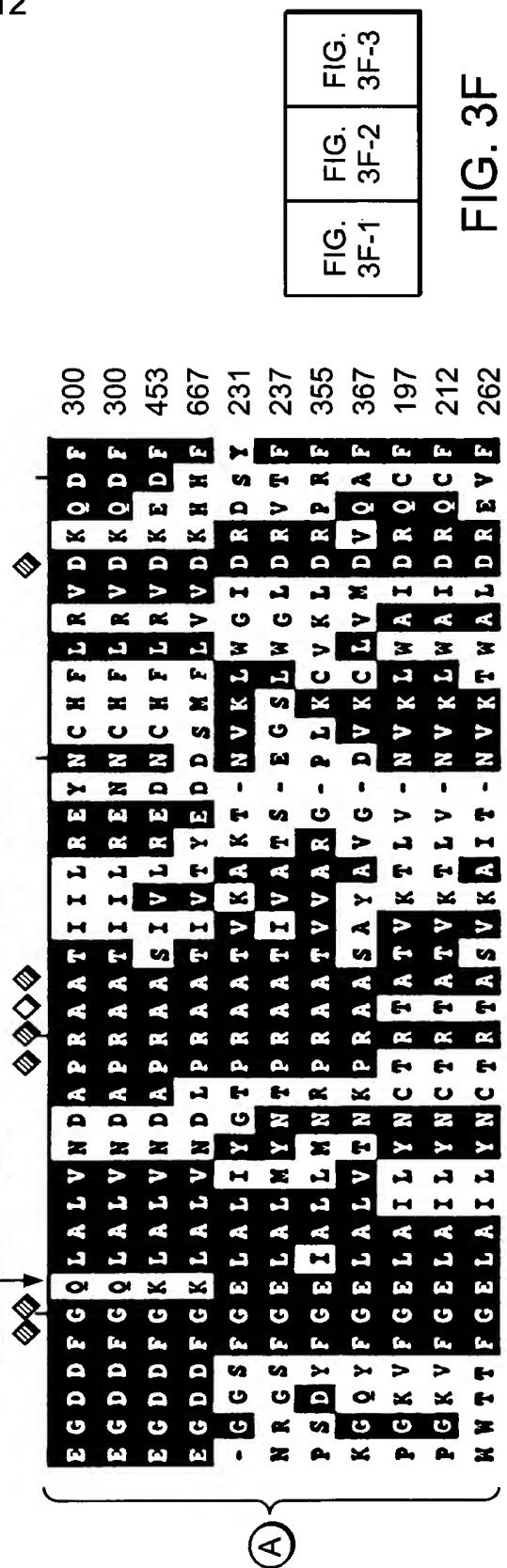
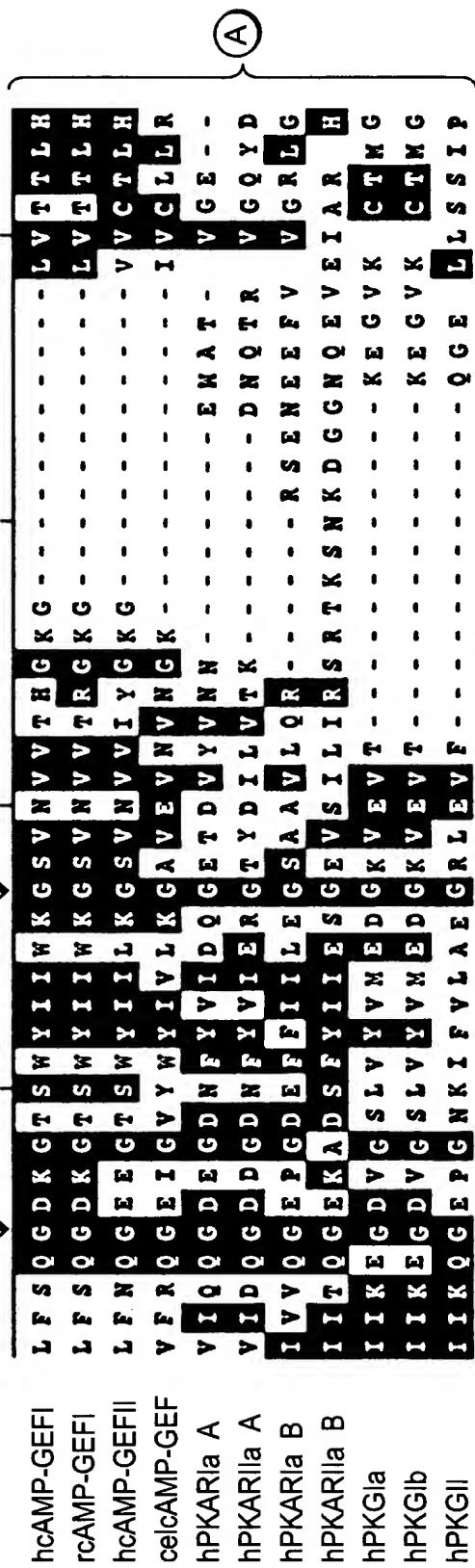


FIG. FIG. FIG.
 3F-1 3F-2 3F-3

FIG. 3F

FIG. 3F-1

R R M H R P R S - - - - -
 R P L E R S S E D V D I I F T R L K E V K A F E K F H P N L L H Q
 S - - C I Q G - - - - -
 V T I C T L G I G T A F G E S I L D N T P R H A T I V T R E S S E
 L T N S E E S L D F S E S L E Q A S T E R V L R A G R Q L H Q H L
 L I E P H V P L R P A N T I T K V P S E K I L R A G K I L R N A I
 C Q V L L D E G A L C H V K H D W A F Q D R D A Q F Y R F P G P E
 W Q V L L E D G V L N H V D Q E H H F Q D K - Y L F Y R F L D D E
 D E E L D L I F E E L L H I K A V A H L S N S V K R E L A A V L L
 V D D L E I I Y E E L L H I K A L S H L S T T V K R E L A G V L I
 F G Q L A L V N D A P R A A T I I L R E Y N C H F L R V D K Q D F
 F G K L A L V N D A P R A A S I V L R E D N C H F L R V D K E D F
 M S G T P D K I L E L L L E A M G L D S S A H D P K E T F L S D F
 M S G T P E K I L E H F L E T I R L E A T L N E A T D S V L N D F
 V S Q W V A L Y G S M L H T D P V A T S F L H K L S D L V G R D T
 V L Q W A A M Y G D L L Q E D D V S M A F L E E F Y V S V S D D A
 G S S C A I Q V G D K V P Y D I C R P D H S V L T L Q L P V T A S
 Q K R Q P I R G S D E V L F K V Y C M D H T Y T T I R V P V A T S
 R L F V V N P Q E V H E L I P H P D Q L G P T V G S A E G L D L V
 R L F A C P R E Q F D S L T P L P E Q E G P T V G T V G T F E L M
 R R F N E L Q Y W V A T E L C L C P V P G P R A Q L L K K F I K L
 R R F N E I Q F W V V T E I C L C S Q L S K R V Q L L K K F I K I
 R L L D P S W N H R V Y R L A L A K L S P P V I P P F M P L L L K D
 S L M D P S R N H R A Y R L T V A K L E P P L I P P F M P L L I K D
 R V S H L H E D S Q V A R I S T C S E Q S L S T R S P A S T W A Y
 - - - - - D A A Q A N K N H Q D V R S Y

FIG. 3F-2

12/12

- - - C S Y Q L L L E - - - - -	20
I C L C G Y Y E N L E K G I T L F R Q G D I G T N W	80
- L R - - - - - W - - - - -	32
L L R I E Q K D F K A L W E K Y R Q Y M A G L L A P	160
L A T C P N L I R D R K Y H L R L Y R Q C C S G R E	92
L S R A P H M I R D R K Y H L K T Y R Q C C V G T E	240
P E - - P V G T H E M - - - E E E L A E A A V A L L	166
H E D A P L P T E E E K K E C D E E L Q D T M L L	319
F E P H S K A G T V L F S Q G D K G T S W Y I I W K	246
F E S H A K G G T V L F N Q G E E G T S W Y I I L K	399
N R I I K D V E A K T M R L E E H G K V V L V L E R	326
N R I L R D V E A N T V R L K E H D Q D V L V L E K	479
L L T H R V F M P S A Q L C A A L L H H F H V E P A	405
I M M H C V F M P N T Q L C P A L V A H Y H A Q P S	559
R L S N L L R E Q W P E R R R C H R L E N G C G N A	485
R M I A A L K E Q L P E L E K I V K Q I S E - D A K	638
V R E V M A A L A Q E D G W T K G Q V L V K V N S A	565
V K E V I S A V A D K L G S G E G L I I V K M S S G	717
S A K D L A G Q L T D H D W S L F N S I H Q V E L I	645
S S K D L A Y Q M T I Y D W E L F N C V H E L E L I	797
A A H L K E Q K N V N S F F A V M F G L S N S P I S	725
A A H C K E Y K N L N S F F A I V M G L S N I A V S	876
M T F I H E G N H T L V E N L I N F E K M R M M A R	805
M T F T H E G N K T F I D N L V N F E K M R M I A N	956
V Q Q L K V I D N Q R E L S R L S R E L E P	881
V R Q L N V I D N Q R T L S Q M S H R L E P R R P	1011

FIG. 3F-3